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ABSTRACT

The paper describes a study of the relationship of personality and family variables to the capacity of 42 families to care for their handicapped infants. The predictor variables included two distinct measures of commitment as well as measures of consensus, resources, boundary permeability and locus of control. Outcome measures were the child's rate of development and teacher ratings of parent performance regarding the child and program activities. Parents and children attended an infant program for 1 hour weekly sessions. Among findings discussed is that commitment to child care and program activities were the most potent predictors of the child's rate of development. Maternal rankings of goals unrelated to family and child goals was consistently the most potent predictor of teacher ratings of maternal performance. Results supported the thesis that parent performance and child development are related to family variables. Among six appendixes are parent interview measures constructed for the study. (CL)

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Family Performance Prediction Study I

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Bureau of Education of the Handicapped

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Most children grow to maturity in families through a continual sequence of exchanges between the child and its parents. It is in these intimate and emotionally charged family groups that children develop their first and often most lasting loyalties, their manners, mores and the earliest conceptions of the physical and social contexts in which they live. The sheer mass and complexity of the ideas and activities that a child must master in order to develop normally is staggering. That one or two untrained adults can, with minimal professional input, usually provide an environment in which children thrive is surprising. While this is not to say that early childhood is the only time in which such learning can occur, it is very clear that it is a very important period.

Of course, not all children thrive under the conditions that typically promote child development nor do all parents seem to be able to create environments that are conducive to child growth. In these adverse circumstances parents or civil authorities generally seek professional assistance.

Historically, professional efforts to enhance child development were committed to the direct treatment of the child. Professional interactions with the parents were often quite limited. Over the past decade, however, there has been a trend toward increased participation of parents in treatment of their own children, successful involvement of parents has been reported both for problems of social-emotional development (Anchor & Thomason, 1977; Berkowitz & Graziano, 1972; O'Dell, 1974; Tavormina, 1974) and for delays in

intellectual development (Bronfenbrenner, 1975; Stedman, 1974). More recently, workers have begun to report instances in which generally effective parenting techniques have failed to produce change in a particular family or situation. It was the purpose of this study to investigate certain variables that appear to influence the implementation of treatment regimens by parents with their own children. In the next section evidence for the overall efficacy of the parent intervention approach will be cited and instances in which this approach failed to produce change, will be presented. Following this, sources of failure will be discussed and a framework, that might account for program failure will be offered.

Review of Literature

Efficacy of Parent Mediated Interventions

Research on the efficacy of this parent-as-therapist approach to the treatment of child problems, permits some conclusions regarding its utility. There is now ample data to indicate that home interventions with "misbehaving" children produce desirable changes in child behavior (O'Dell, 1974; Patterson, 1971, 1974). Similarly, studies of home programs for developmentally at risk children have shown these to be effective in producing substantial changes in child development (Bronfenbrenner, 1975; Gordon, 1969; Levenstein, 1970; Radin, 1972). Radin (1972) studied the effect of three levels of maternal involvement with their child's preschool program on child intellectual performance. All children were enrolled in a preschool and all received bi-weekly home visits by a teacher. Mothers in the involvement condition (groups A & B) were specifically involved in home tutoring sessions. In addition, mothers in group A were invited to attend weekly group discussions of child rearing and child development. Mothers in group C did not participate in the home tutoring group sessions. Total time spent tutoring was close to 11 hours for each group. Immediately after the program's termination, children in all groups showed significantly increased scores on the Peabody Picture Vocabulary Test, with no differences among the three groups. Upon retesting after a lapse of one year, the "mother involved in tutoring only" condition (group B) mean Peabody Picture Vocabulary Test score was significantly greater than

the mean of group C. Moreover, gain scores for group A (+9.7) and B (+14.0) were found to be greater than the mean change score of group C (-1.0). It appears that even relatively small amounts of maternal involvement with home teaching activities can improve maternal teaching abilities and have a stimulating influence on the progress of their children's development.

After reviewing the literature on developmentally at risk children, Bronfenbrenner (1975) concluded that parent mediated interventions produced longer lasting gains than did child-focused approaches. On the whole then, the evidence suggests that parents can use professional input to enhance their child's development. At the time these successes were being documented, however, it will be seen that evidence was accumulating which documented the failure of ordinarily successful interventions to produce changes in child behavior in certain families and with particular parents.

Variables Affecting the Outcome of Home Interventions

It has become common to hear of parents who have had training but failed to modify their behavior in accordance with their new learning as well as instances in which parents have refused instruction (Fraiberg, 1975; Patterson, Cobb, & Ray, 1973; Reid & Hendricks, 1973; Tharp & Wetzel, 1969; Wahler, 1972). These failures to change despite what are often strenuous professional efforts suggest the existance of potent forces that can and do impede therapeutic change. Professionals have observed these failures and have commented upon a variety of characteristics that have adversely affected parent mediated interventions. For example, workers have observed that mothers lacking financial and manpower resources have had difficulty learning child

management techniques (Patterson, Cobb, & Ray, 1972) as do depressed mothers (McLean, 1976). Bronfenbrenner (1975) argues that some families exist under conditions that seriously restrict their willingness and ability to participate in activities required by a parent intervention program.

Many factors have been implicated in the failure of home programs. Inadequate nutrition or health care, poor housing, lack of education, limited income and the necessity for long or unusual working hours all consititute components of an environment that can sap parents of time and energy. Parental depression or psychopathology, chronic illness, limited intellectual abilities and adverse family relationships are individual and family characteristics that can also limit parental willingness and capacity to carry out home program activities. Although these and other factors can impair parent caretaking, little systematic study of the various causes for parent failure has occurred.

Aspects of the family and the total context in which it exists, greatly influences its capacity to nurture its children. Bronfenbrenner (1975) argues that professional efforts can be profitably directed toward the environment in ways that enable parents to learn and to exercise their caretaking skills with increased effectiveness. The need for interventions whose impact is focused on the family and its social and economic context arises when the conditions of life make it impossible for parents to perform their child-rearing functions, despite an interest in doing so. Under these circumstances no direct form of intervention aimed solely at enhancing child development is likely to have a substantial impact. The basic requirements for the physical maintenance of the family must be met first. Beyond this, it

is essential that the social environment supports competent parenting. Only after these needs have been attended to can the quality and extensiveness of parent-child interaction be improved.

A Framework for Study

At this point it should be clear that a wide range of variables can influence the outcome of home interventions by depriving parents of the will, support or resources needed for the implementation of a program. Equally obvious is the need for a framework that will permit us to organize into a manageable structure as many of these adverse influences as possible. Tallman (1971) has articulated just such a framework. After reviewing the task group literature he concluded that commitment, consensus, resources and permeable boundaries were prerequisites for effective group functioning. He argues that these variables are also prerequisites for the functioning of families, which are naturally occurring groups. Tallman's hypothesized prerequisites for family functioning focus our attention on several dimensions that are thought to be critical for any family. These variables span several levels of analysis, from the intra-personal to the environmental. Each of these variables designates a specific domain of family functioning that can be studied. This represents a substantial improvement over many other family models which tend to be considerably less specific about the family processes that warrant investigation (e.g. Wolfensberger & Menolascino, 1970). Moreover to the extent that commitment,consensus, resources or boundary permeability prove to be related to a family's ability to care for its children, it is likely that those variables will prescribe different points at which to intervene in order to enhance family functioning. Such a framework

would undoubtedly prove to very useful to clinicians and investigators concerned with the functioning of families.

Commitment. The first of these variables, commitment, implies a decision by family members to maintain the handicapped child as a family member and to facilitate his learning and development. Lack of this commitment base may be seen in the early institutionalization of a child (Wolfensberger & Menolascino, 1970). It can also be seen where a family member sabotages efforts to bring about improvements in child behavior in order to obtain the child's expulsion from the household (Reid & Hendricks, 1973; Tharp & Wetzel, 1969). For many parents, commitment to a handicapped child and his educational program begins tentatively. Nevertheless parental commitment is essential to working with handicapped youngsters for it is only when committed that a parent is likely to persevere and find satisfaction in carrying out activities in which many of the obvious rewards of child rearing are absent. To a very great extent the anticipation and continued availability of reinforcements for child care activities are responsible for the instigation and maintenance of parental commitment to child related activities.

The sources that determine the reinforcement a parent receives during the process of learning and implementing new ways of caring for children are not well known. In a discussion of the influence process in behavior therapies, Kanfer and Phillips (1970) write that the workers in the field of human behavior change have been slow to study the characteristics of the behavior shaper. They argue that this oversight stems from a failure to recognize that the reinforcer's characteristics affect the reinforcement's potency and so may affect

the outcome of the intervention. Presumably the attractiveness of the trainer, which is the parent's subjective evaluation of that person's potency as a social reinforcer, also affects parental responsiveness to the trainer's instructions. Although the role of the influence process has not been studied in the parent-professional dyad, the influence process has been studied in dyads which share certain essential characteristics with the parent-professional dyad. To the extent that these dyads are similar, findings regarding other dyads can illuminate the influence process in the parent-professional dyad. In particular, the teacher-student dyad and the therapist-client dyad are similar to the parent-professional dyad in that these relationships are voluntary and either member can terminate the relationship at any time. These relationships also share with each other the fact the compliance by parents with a curriculum, regimen, home program or self-modification program cannot be enforced (Davison, 1973). Another commonality in these relationships is the asymmetry which stems from the parent's, client's or student's dependency on the professional for information and direction. Thus it is argued that data on dyads consistent with this model can supplement information known about parent-trainer variables, particularly as they are related to how the trainer may influence parent behavior in prescribed directions. In teaching (Bidwell, 1973) and in psychotherapy (Goldstein & Simonson, 1971), researchers have grounded their theorizing about the influence process in the finding that the more attracted one person is to another, the more willing he is to be influenced by that person (Back, 1951). It is suggested that the more attracted the parent is to the professional, the more potent will be the professional's social reinforcements and

consequently the more committed the trainee will be to the learning process.

Goldstein and Simonson (1971) have generated correlational support for the association of attraction and influence in psychotherapy. Specifically, they found "when patient attraction to therapist is high the patient (a) is less covertly resistive, (b) talks more, (c) is self- discriptively sicker, and (d) has more favorable prognostic expectancies for himself" (p. 164). It was also found that the more attracted the patient is to the therapist, "the more attracted the therapist is to the patient (a) the more the patient talks, (b) the more open he is in the content of his communications, and (c) the less covertly resistive he is" (p. 164). Thus, patients who are rewarded through the interpersonal attraction are more cooperative patients. Perhaps parents who are rewarded in like manner are also more open to change in the desired directions and are more committed to child care goals.

The question as to whether such therapist variables as warmth, empathy and genuineness influence the outcome of behavioral interventions, has been raised (Hamerlynck, 1973). The work of Truax and his colleagues shows that high levels of these variables are positively associated with client improvement while lower levels are associated with failure to modify client behavior (Truax, 1971). More directly relevant to parent training is the finding that college instructors evidencing higher levels of warmth, empathy and genuineness obtain better results from their students than do teachers possessing lower levels of these variables (Truax, 1971). The mechanism or process by which these characteristics influence behavior is unclear.

Truax (1971) suggests that warmth, empathy and genuineness are sought by clients and that varying levels of these may be used by therapists as reinforcements with which patient commitment to theraputic goals is maintained.

A major component of the training of parents occurs through the modeling of desired parent behavior (O'Dell, 1974). Here, as with shaping and didactic training techniques, the reinforcements available in the training situation influence the intervention's outcome. As of yet, variables affecting the potency of modeling have not been studied extensively with regard to parent training. In general, however, the extent to which observers will be influenced by a model has been demonstrated to depend upon several variables. Most important is the finding that the performance of modeled behavior will be deterred or facilitated depending on its consequences for the model and the reinforcements directly experienced by the observer (Bandura, 1971).

In addition, model characteristics have also been found to influence observer behavior. Models who possess high status in power, prestige, and competence are emulated more than models possessing these characteristics in lesser degrees. In this condition it is interesting to note that a model's perceived status tend to increase or decrease depending on whether the model's efforts are rewarded or punished (Bandura, 1971). A model's capacity to influence is also affected by his attractiveness to the observer. For example, individuals who are warm and nurturant generally elicit more spontaneous, imitative behavior than models lacking these qualities (Bandura, 1971). After reviewing the modeling literature, Bandura (1971) concluded that there was evidence that the observation of a model being rewarded and

the direct experience of reward in connection with performance are of primary importance in motivating the observer.

In the above paragraphs, reinforcement has been shown to be a factor in the processes through which persons are motivated to learn new behaviors. It is suggested that reinforcement is also involved in the processes whereby parents learn new child care techniques. It is also suggested that the maintenance of a parent's commitment to a program is related to the reinforcements that are experienced in the performance of the prescribed child care tasks. In fact, a basic assumption of most programs is that improvements in a child's behavior at home will be experienced as reinforcers that maintain parent behavior once professionals are no longer available to reward competent parenting. Reports of exceptions to this assumption have tempered this opinion with a knowledge that parental commitment may not be maintained by improvements in child behavior. In some instances improvements in children have actually undermined involvement. For example, Tharp and Wetzel (1969) report an instance in which:

> a very seriously pre-delinquent adolescent boy had repeatedly engaged in fist fights with his stepfather. The stepfather had hated the child for years. After four weeks of a closely proctored intervention plan, the boy's misbehavior was rapidly decreasing. The father, fearful that the boy might stay in the home if he performed, disobeyed every instruction which our staff gave him. It was very clear that the boy's continued presence in the home was so punishing to the father that the rewards our staff offered him - praise, encouragement, attention - were swamped. (p. 131)

Just as a behavior management program can be sabotaged, it is also possible to conceive of a situation in which a parent might

intentionally jeopardize the success of an educational program. Theorists of illness behavior (Mechanic, 1972; Watzkin, 1971) and of behavior disorders (Haley, 1973) argue that therapeutic regimens will be opposed where rehabilitation will produce changes not desired by family members. Such changes might include the loss of income such as disability payments (Haley, 1973; Tharp & Wetzel, 1969; Waitzkin, 1971) transportation (Waitzkin, 1971), or the elimination of justification for removing the child from the household (Reid & Hendricks, 1973; Tharp & Wetzel, 1969).

On occasion the failure of parents and children to commit themselves to program goals has occurred where they have been encouraged to adopt behaviors that violate their cultural norms. In general, the likelihood of parental non-compliance will increase where a program's execution requires a parent to adopt a behavior pattern that is incompatible with a behavior pattern or role already held (Berger, 1974; Lazar & Chapman, 1972; Radin, 1974). For example, in one instance workers attempted to shape eye contact in Navajo children. This effort failed because traditional Navajo culture strictly prohibits sustained looking at another person and consequently the Navjo children found counselor attempts to shape this behavior highly aversive (Goldstein, 1974).

The prevalent reports of non-involvement of fathers in home programs may, in part, be due to just such culture-program conflicts. In a discussion of intervention programs for retarded children Stedman (1974) observes that as a rule, it is difficult to involve fathers in a program. Concerted efforts to involve fathers have probably been

only infrequently reported. Lindsley (1966 cited in Patterson, 1971) made a specific effort to train fathers in behavior modification. He reported that of the original 24 fathers, only 14 completed the training program but gave no reason for this attrition. Lazar and Chapman (1972) reported one instance in which fathers were involved; they increased play with their children as a result of consultation with male home visitors. However visits geared to father were discontinued when it was found, through parent feedback to program staff, that the roles of playmate and head of the household conflicted. Instead fathers met as a group and worked on community problems and planned activities for mothers and children.

Parent personality characteristics also influence parental willingness to implement behavior management or home training activities. Miller and Gottlieb (1974) have developed a new scale on the MMPI with which they are able to predict the outcomes of behavior management programs. They suggest that their instrument measures the balance between a mother's tendency to internalize or externalize responsibility. Mothers who behave as though responsibility lies with others are less likely to implement a home program. Possibly other personality variables also influence parent behavior. It is possible that parents who have experienced very little success in child rearing will develop low generalized expectations specific to goal attainment in the area of child rearing. Such a sense of failure might well arise out of the difficulties of caring for a severely disabled child or through prolonged experience with an oppositional child. While not yet studied with regard to parents of handicapped children a similar phenomena has been documented in retarded children. Cromwell (1967) found that

retarded children having extensive histories of failure, respond to failure by putting forth less effort on succeeding trials than do children of normal intelligence. Presumably children who are retarded have met with less success in their lives than their normal counterparts. Just as the retarded children had fewer successes and so developed a high expectancy for failure, it is possible that parents having normative expectations for their handicapped child's development will interpret their child's delayed growth as an indication of their failure in a very important area of concern. It is under conditions such as these that Seligman (1975) theorizes that depression occurs.

It has been argued (Klinger, 1975) that depression results when an individual has a low expectancy for success of attaining a highly desired end. Because depression and a low expectancy for influencing aspects of an individual's life run together it is not surprising that depressed mothers often fail to implement behavior management techniques with their children (McLean, 1976). Clearly, then, reinforcement plays a major role in initiating and maintaining parental commitment to child care and program activities.

The relationship of reinforcement to commitment suggests that parental commitment may be enhanced by manipulating reinforcements associated with parenting. For example, when many of the gratifications of infant care, such as the observation of rapid development, are greatly reduced,as with a severely handicapped child, many parents will be ambivalent about committing themselves to what they perceive as a lifetime of unrewarding, futile effort. In these cases, short-term contracting may provide reduction of this anxiety and shift parental perception from long range commitment, which they find

overwhelming, to more acceptable periods of days or weeks. If desired, succeeding contracts may be lengthened and, in time, eliminated altogether. The use of time-limited agreements allows parents to control their involvement and permits them a trial period in which to familiarize themselves with their program responsibilities. This procedure is common in behavioral therapy (Knox, 1971). Other procedures may also be used in generating parental commitment. Naturally, the particular strategies used will vary for different families. However, there are instances, where commitment is initially high and the potential for child growth substantial, in which these factors are not sufficient to permit improvements in caretaking. Where the social and physical environments in which parents live are hostile to effective child rearing it is unlikely that even massive doses of professional and child reinforcement will be sufficient to produce sustained involvement with a home program. For this reason it is necessary to study more than commitment; it is important to study other characteristics of the family and its environment.

Resources. Resources is an obvious characteristic of all families. This term refers to both emotional and physical resources. A family must have sufficient control over quantitites of food, shelter and manpower to maintain itself and the disabled member. In addition, the family must have emotional support in order to carry on under emotionally trying circumstances. Bronfenbrenner (1975) writes that many families "live under such oppressive circumstances that they are neither willing nor able to participate in the activities required by an intervention program. Inadequate health care, poor housing, lack of education, low income and the necessity for full-time work all rob

parents of time and energy to spend with their children" (p. 465). Support for this position comes from Garbarino's (1976) finding that the ecological context generated by the material and educational resources available to a family is an important factor in the etiology of child abuse. He suggests that economic stress and inadequate educational resources undermine parental functioning. These data are consistent with the literature on handicapped children and their families.

It is well documented that a retarded child makes taxing emotional and physical demands on family members (Farber, 1960; Holt, 1958; Mercer, 1966) as do a child's physical disabilities (Mercer, 1966; Walker, Thomas, & Russel, 1971), oppositional behavior (Berkowitz & Graziano, 1972) and chronic illness (Crain, Sussman, & Weil, 1966). Klein and his colleagues (1967) report that spouses of chronically ill persons experience increases in tension, illness and a reduced capacity to work. This unfortunate reaction is of particular concern and may be expected to adversely affect the success of home programs for disabled children. Additional data which argue that adequate resources are required if families are to be able to support an intervention is found in the work of Patterson, Cobb, and Ray (1973) who have observed that mothers lacking financial and manpower resources have difficulty learning child management techniques. The importance of adequate capabilities and housing has been documented in connection with compliance with vocational rehabilitation programs for retarded adults (Brolin & Wright, 1971). Conversely, it seems likely that a reduction of parental distress will have a positive effect on the child. This supposition is supported by the finding that an improved rate of

recovery from surgery in hospitalized children is associated with efforts to reduce the anxiety of their mothers (Skipper & Leonard, 1968). Exhaustion is a hazard of keeping a disabled child at home (Holt, 1958) and exhaustion is associated with the institutionalization of children (Mercer, 1966). Because problem ridden families having a severely retarded child often require substantial manpower and financial resources Wolfensberger (1969) argues that such families be eligible for housekeeping assistance, day care and income subsidy so that they may continue to maintain the child in their home. The family's social network may prove to be another source of emotional and material assistance to a family in addition to what is provided by professionals.

Consensus. The third variable to be considered in this framework is consensus. Family members must reach some agreements about the nature of their goals, the allocation of tasks and the coordination of activities, including child care and therapy. Where there is a lack of consensus among parents regarding the execution of household and therapeutic activities, or where parents and professionals differ over home program goals the treatment of the child may be expected to suffer. For example Tharp and Wetzel (1969) cite an instance in which parental quarreling was so intense that the parents were unable to cooperate with one another to accomplish the targeted behavior change. Patterson, Cobb, and Ray (1973) have observed that marital discord is associated with failure to learn child rearing skills. Conflict between a retarded child and members of their families or with schools is thought to be associated with the institutionalization of retarded persons (Mercer, 1966). When there is a lack of consensus

between spouses because the father is unfamiliar with the rationale for the procedures his wife uses, Radin (1974) suggests that the fathers be involved in the program in ways that are consistent with their roles in their own family. She has found that involved fathers are more likely to reach agreement with project staff and their wives on goals and procedures than are fathers who remain uninvolved. Beyond this, the capacity of parents to resolve the differences can be enhanced by teaching them ways to negotiate and to seek compromise solutions (Weiss, Hops, & Patterson, 1973).

Where consensus between parents and program staff breaks down negotiation procedures can be utilized to reduce conflicts between the staff and the family members. Differences over goals and procedures can be pinpointed, the alternatives considered, the parents and staff discuss the advantages and disadvantages of the various possibilities. Ultimately a compromise solution can be designed and where needed the agreement recorded as a written contract.

Boundary permeability. The fourth factor of Tallman's prerequisites for family problem solving is boundary permeability. Families must maintain control over their internal affairs if they are to survive as a unit. At the same time the family must remain sufficiently open so that information and materials will be able to enter their system. In situations where major events affecting family members are determined by external agents the family group will become less effective and essential to its members. This is an important consideration in families that are impoverished or so disorganized that civil authorities make the family's major decisions; in such cases family members may become unusued to making decisions

and so completely lose the ability to function without outside assistance. Alternately, some families are hostile and resistant to what they perceive as intrusions into their family by outsiders. In these cases, it is important not to apply heavy pressure to the family, but instead, to indicate what is available and to avoid acitivities that undermine the family's integrity.

Statement of Problem

In the preceding pages several variables which are thought to influence the outcomes of home interventions were discussed. These included consensus, resources, boundary permeability, commitment, and the expectancy of obtaining reinforcements through child related activities. Each of these variables has been shown to affect human behavior in one context or another, however few of these have received much attention with regard to their impact on the success of a parent implemented program for children and never have they been studied simultaneously so as to determine their combined influence. The purpose of this study was two-fold, first to demonstrate the relationship of parent and family variables to program outcomes and second, to assess their relative potencies in predicting the outcome of a parent mediated intervention. For the purposes of this research two measures of outcome were used, parent performance and the child's rate of development. Data collected with measures of the preceding variables were used to test the hypothesis that commitment, consensus, resources, boundary permeability, and locus of control are directly associated with child's rate of development and parent teaching skills.

Methods

Design

This study assessed the relationship of several measures of personality and family variables to measures reflecting a family's capacity to care for an infant with a handicapping condition. The independent or predictor variables in this study ultimately included two distinct measures of commitment as well as measures of consensus, resources, boundary permeability and locus of control. Two dependent or outcome measures were used in this study; these were the child's rate of development and teacher ratings of parent performance with regard to the child and program activities.

The implementation of this study involved, first, the selection of a pool of items from which measures of commitment, consensus, boundary permeability and resources were constructed. In addition, two other previously validated measures, a second measure of commitment (Farber, 1957) and a measure of locus of control (Gurin, Gurin, Lao & Beattie, 1969) were obtained. These items formed a structured home interview that was read to parents and whose responses were recorded on scales provided to the interviewer. Measures of each child's developmental progress were obtained during parent and child visits to the Infant Program and teacher ratings of parent performance were obtained from that teacher following at least several months of program participation by the family. Once the data was collected, items from the parent interviews were selected and combined to generate homogeneous measures of

commitment, consensus, resources, boundary permeability. This step was not needed for the previously validated measures of commitment and locus of control.

Finally, responses on measures of commitment, consensus, resources, boundary permeability and locus of control were subjected to a series of regression analyses. Two sets of analyses were carried out, one for each of the two outcome measures, child's rate of development and teacher rating of parent performance.

Population

Data from 42 two-parent families, each having a handicapped infant, were analyzed for this study. The children and mothers studied were seen regularly in the Infant Development Program at Meyer Children's Rehabilitation Institute.

The model for this program assumes that parents can be assisted in promoting the development of their young handicapped children. Parents and children attend the Infant Program for one hour weekly sessions. During these sessions the teacher assesses child progress on specific objectives in the areas of sensorimotor and early language development Depending on the child's development on the previous session's objectives the teacher then suggests and demonstrates new activities or modifications of activities already in use. Mother's are encouraged to perform the activities under teacher supervision and to do them at home. In so far as it is possible the educational activities taught to the mothers are designed to be integrated into both caretaking and playful parent-child interactions that regularly occur at home.

All children included in this study were under 36 months of age during the period in which family data were collected. The collection

of the child development data used in this study began at the time of the child's entry into the Infant Program and has continued into the present for all who are still enrolled. Child development, using the Bayley Scales of Infant Development, was assessed at least twice for each child. Etiologically and symptomatically these children compose a heterogenous group that includes infants with cerebral palsy, Down's Syndrome, seizure disorders and sensory handicaps. All children in this population evidenced some developmental delay in the motor and/or cognitive areas at some point during their involvement in this program. This delay ranged from profound to mild. The mean yearly income of these families at the time of data collection was approximately $11,000. Thirty-six percent of the fathers occupied high status positions, 41% of the fathers held middle status positions and 16% held low status positions, as measured by the Revised Scale for Rating Occupation (Warner, Marchia, Meeker, & Eells, 1949, as cited in Miller, 1964).

Measures

Occupational status. Occupational status of employed parents was assessed with the Revised Scale for Rating Occupation (Warner, et al., 1949, as cited in Miller, 1964). This is a seven-point rating scale that permits the ranking of occupations in terms of their prestige. On this scale occupations receiving the three lowest rankings included apprenticeship in high prestige skilled trades, such as electricians, low prestige skilled trades and semi-skilled or unskilled work. Occupations in the highest status category included the professions.

Family variables. The family variables under study, commitment, consensus, resources, and boundary maintenance, are hypothesized to be

prerequisites for effective child care. In this study, measures of these variables have been generated to assess family functioning with reference to a home program for a handicapped infant. All of the personality and family measures were collected during a single interview, and are self-report measures. The relationship of each of these variables to parental skills and improvement in the level of child developmental functioning was analyzed in this study. The measure of commitment was constructed from 19 items, each response was scored on a Likert-type or fixed category scale by the interviewer. These items may be found in Table 1.

Table 1

Items Composing Scale of Commitment

How much physical help do you get from daycare (to mother)?

Do you have much energy left by evening (to father)?

How much love and affection is there in your home (to mother)?

How much do you agree with this statement:
I feel that this baby, because of his problems, takes too much time and attention away from others in the family (to both parents)?

About how much time do you spend playing with your infant (not just supervising) on non-working days (both parents)?

What percent of your child's care do you do (both parents)?

Over all how delayed do you think your child is (both parents)?

Do you think your child will learn to (short term goal selected by parent; both parents)?

Do you think your child will learn to (long term goal; father)?

How important is your working with him/her in developing (short term goal; to father)?

Table 1 - Continued

How important is your working with him in developing (long term goal; father)?

How confident are you that your child's teacher is doing a good job with your child (to father)?

Are you interested in knowing what goes on in the classroom (to father)?

How much do you agree with the statement:
Most of the time my wife does not understand our baby's problems (to father)?

The measure of consensus is composed of the responses of 14 Likert-type items and the sum of the 10 items that compose the measure of the program's reinforcement value as well as the sum of the differences between each spouse's ranking of each of the 10 items in the Index of Consensus. These items may be found in Table 2

Table 2

Items Composing Scale of Consensus

Do you agree that there is no way a parent can help with a special problem his (her) baby has because only a professional can help a handicapped or special baby (to mother)?

How confident are you that your child's teacher is doing a good job with your child (to mother)?

Infant Development Program teachers cannot be much help to a parent (to mother)?

How important is your working with him/her in developing (long range goal; to mother)?

Over all how satisfied are you with the Infant Development Program (both parents)?

To what extent do you feel the activities demonstrated to you are appropriate to your chief concerns for your child (both parents)?

Table 2 - Continued

How much do you agree with the following:
Most of the time my husband does not understand our baby's problems (to mother)?

All people have their own ideas about the best ways to do things. How much do you agree with the way your (husband, wife) takes care of your baby (both parents)?

When a baby has a special problem it's father should be expected to learn special ways of taking care of him (to mother)?

Do you agree that there is bound to be trouble when husbands and wives do the same kind of activities with their handicapped child (both parents)?

Items from measure of program's reinforcement value.

Sum of differences between spouses rankings of items on the Index of Consensus.

The measure of resources was constructed from 22 Likert-type and fixed category items in Table 3.

Table 3

Items Composing Scale of Resources

How many people in your household need to be taken care of because they are sick, old or young (to mother)?

How much physical help do you get from (ask mother)?
husband
children
babysitter

How much encouragement and praise do you get from (to mother)?
husband
relatives
friends/neighbors

How satisfactory is the distribution of labor (to both parents)?

Do you have much energy left be evening (to mother)?

Income of family.

Table 3 - Continued

Educational level attained by father.

Educational level attained by mother.

Occupational status of father.

Estimate by mother of physical health of:
child
mother

Emotional health - self rating:
father
mother

How important is your working with (him, her) in developing (short term goal, mother)?

How much time do you spend working with your infant on program activities on non-working days (both parents)?

How much love and affection is there in your home (to father)?

Boundary permeability was assessed with seven items shown in Table 4.

Table 4

Items Composing Scale of Boundary Permeability

How many community service agencies have you been in contact with during the past 12 months?

How many are you still in touch with?

Have you lived in your own home (own or lease) during the past 12 months?

How many people have moved in or out of your house in the past 12 months?

Do you feel that you have the final say over what is done with your child (to both parents)?

Table 4 - Continued

How much physical help do you get from relatives and family (to mother)?

A copy of the interview format for these measures may be found in Appendix A. In this format items are arranged in the order they were presented in the interview. Headings indicate the variable under which the item was originally conceptualized.

An Index of Consensus (Farber, 1957) was included as a measure of the relative strength of parental commitments to family life and child care as compared to goals that are unrelated to family life and child care. This index was also used to generate a measure of parent consensus over major family goals. On this instrument, each parent ranked 10 goals with respect to their importance to the parent. The 10 items composing this scale are "a place in the community," "happy children," "emotional security," "affection," "economic security," "personal development," "companionship," "religion," "wise financial planning," and "attractive home." A separate score was obtained for each parent. The sum of differences between spouces rankings were used to measure consensus. Commitment to child, family and personal life was assessed for each parent using the average of the rankings for goals unrelated to family life and child care, namely items 1, 5, 9 and 10.

Personality variables. Caretaker locus of control was assessed using items which Gurin, Gurin, Lao, and Beattie (1969) found to be factorally related to an individual's expectancy that he can influence events in his life. This scale contains five items. Each item is composed of two statements, one of which depicts an internal view,

the other an external view. For each question, the parents were required to relate the statement that best reflected their beliefs. For example, parents had to chose between "what happens to me is my own doing" and "sometimes I feel that I don't have enough control over the direction my life is taking." A copy of this scale may be found in Appendix C.

The Infant Program's reinforcement value for the child's mother was assessed with 10 items, using a paper and pencil measure constructed for this study. This measure assessed the reward value of the program in terms of other parents from the program, home activities, teacher-parent conversations, teacher interest, parent-infant impact on family life, parent security, parent confidence, and assistance to the parent. Because of its high correlation with consensus, this measure was combined with those items and was not analyzed separately. A copy of this measure may be found in Appendix D.

Maternal performance. A measure of maternal performance was developed. Mothers were rated by teachers on a five-point scale. In rating mothers, teachers were instructed to consider mother's attendance, regularity in carrying out program activities, child teaching skills, and the quality of physical child care given. No fathers were assessed using this instrument as the teachers were insufficiently familiar with their skills due to lack of attendance by fathers. The specific criteria for rating mother's performance may be found in Appendix E.

Measure of child development. The development of children involved in the program in this study is assessed with the Bayley Scales of Infant Development (Mental Scale) except in the case of one blind child, whose development was assessed with the Maxfield-Bucholtz Social Maturity Scale. The Bayley is a standardized and normed in-

strument for the assessment of intellectual abilities in children from birth to 30 months. The Maxfield-Bucholtz is an adaptation of the Vineland Social Maturity Scale and provides norms for blind children from ages birth to 21 years old.

Procedures

For each family, both parents were asked questions by a female interviewer who was not on the staff of the Infant Development Program. The interviews were highly structured. The interviewer read or paraphrased each item in the interview, and parents were strongly encouraged to respond in terms of the anchors offered them. Each interview required between one and two hours to complete. Each parent was interviewed separately. All items were read to the parents except for those in the Index of Consensus and the Program's Reinforcement Value Scale; for all parents who could read, these two scales were filled out without the interviewer reading them.

Most children were evaluated on the Bayley Scales of Infant Development (Mental Scale) or in one instance on the Maxfield-Bucholtz at three to four month intervals. Because of the slowness of their development, severely and profoundly retarded infants were evaluated at six to twelve month intervals. These evaluations were done by a psychologist who was not a member of the Infant Development Program intervention staff.

Evaluation of each mother was done by the teacher who had had the most substantial contact with that mother. Where two teachers had worked with a child and parent, both were asked to rate the parent independently of each other and the average of their ratings was used. The evaluations of the mothers occurred at the time at which all the interviews were completed.

Results

Eight scales were used in the collection and analysis of data obtained through interviews of parents. Five of these measures, commitment, boundary permeability, resources, consensus and the program's reinforcement value, were generated specifically for this study. The remaining measures were an Index of Consensus (Farber, 1957) and a locus of control measure (Gurin et al., 1969). Farber's Index was used to generate a measure of consensus between spouses and a measure of commitment based on each parent's ranking of the goals presented in the Index of Consensus.

The first step in the data analysis required generating measures of each of the four family variables each of whose content was as homogenous as possible. Nunnally (1967) argues that the homogeneity of content in a scale is manifested in the average correlations among the items and in the patterns of those correlations. Item-total correlations were computed for each item with each of the four family measures (commitment, consensus, resources, and boundary permeability). Items were assigned to the scales with which they had the highest item-total correlations. The program's reinforcement value and the consensus measure derived from the Index of Consensus were both subsumed within the measure of consensus because of their high item-total correlations with that scale. The average item-total correlation for each of the four resulting measures of commitment to child care and program activities, consensus, resources, and boundary permeability may be found in

Table 5. The values obtained indicate an acceptable level of homogeneity within each of the scales.

Table 5

Means of Item-Total Correlations for each Scale

Variable	Average Correlation	Range of Correlations	Number of Items
Commitment to children and program activities	.44	.26-.69	19
Consensus	.48	.21-.72	16
Boundary permeability	.46	.27-.68	7
Resources	.44	.26-.62	22

A descriptive analysis of each of the measures is shown in Table 6. The data collected are normally distributed, however, most of the measures suffer from restriction of range in obtained scores. Measures least affected by restriction of range are the measures of commitment to child care and program activities, the rate of child development, paternal locus of control and maternal locus of control.

Table 6

Descriptive Analysis of Predictive and Outcome Measures

	Mean	S.D.	Actual Range	Potential Range
Average Task Goal (Index of Consensus)-mother	25.9	9.9	16.5-69.5	16.5-83.5
Average Task Goal (Index of Consensus)-father	31.4	15.7	16.5-75.0	16.5-83.5

Table 6 - Continued

	Mean	S.D.	Actual Range	Potential Range
Consensus between mother and father on Index of Consensus	787.0	95.1	464-956	0-1000
Program's Reinforcement Value	841.4	74.0	700-980	0-1000
Mother's I-E Score	62.0	33.7	0-100	0- 100
Father's I-E Score	76.0	29.4	0-100	0- 100
Boundary Permeability	472.6	88.8	232-600	0- 100
Resources	1419.0	244.6	911-2025	0-2200
Commitment	1167.7	214.6	672-1521	0-1900
Teacher Rating of Parent Performance	79.8	22.4	25-100	0-100
Rate of Change On Bayley Scales	.54	.46	-.23-1.79	-----

Test-retest reliability of the family variable measures were obtained by interviewing six families a second time approximately five months after the initial interview. Correlations between responses for the six families on the 10 predictors range from .58 to .97. Only the correlation of the consensus between parents failed to reach significance. Specific correlations are reported in Table 7.

Table 7

Test-Retest Reliabilities of Individual Scales

Average Task Goal - mother (Index of Consensus)	.93**
Average Task Goal - father (Index of Consensus)	.96**

Table 7 - Continued

Consensus Between Parents (Index of Consensus)	.58
Programs Reinforcement Value	.79*
Mother's I-E Score	.74*
Father's I-E Score	.79*
Boundary Permeability	.97**
Resources	.80*
Commitment	.96**
Consensus	.91**

* $p < .05$

** $p < .01$

Correlations of the family variables with social, educational and economic indicies are shown in Table 8.

Table 8

Correlations Of Socio-Economic Indicators with Family Variables and Outcome Measures

	Income	Education Mother	Education Father	Occupation Father
Boundary	.14	-.04	.11	.14
Resources	.39**	.44**	.27	.29*
Commitment	-.16	-.21	-.46**	-.45**
Consensus	.33*	.33*	.23	.29*
Rate of Development	.20	-.12	-.06	.05
Maternal Performance	.33*	.41**	.41**	.35*

* $p < .05$
** $p < .01$

The reliability of teacher ratings of maternal performance was assessed by computing the discrepancy score for each set of ratings on parent/child dyads with whom two different teachers worked. The mean discrepancy scores range from 0. to 1. The maximum possible discrepancy score was 4.0. The relationship of the family and personality variables to parent performance and the rate of child development was assessed first by correlating the predictors with the outcome measures. These correlations are presented in Table 9. The correlation between the two outcome measures (R=.09) was not statistically significant.

Table 9

Correlations of Family Predictor Variables with Outcome Measures

	Maternal Performance	Child Rate Of Development
Boundary	.09	.18
Resources	.24	.04
Commitment	-.11	.50**
Consensus	.21	.08
Average Task Goal - Mother	-.47**	.03
Average Task Goal - Father	-.41**	-.08
I-E - Mother	.09	-.16
I-E - Father	.30*	-.04
Maternal Performance	---	.09

*$p < .05$

**$p < .01$

Relationships among the variables were then assessed. Given a dependent measure and several independent measures, step-wise multiple regression generates the best predictive equation determining the serial order in which the independent variables are to be entered into the equation. The order in which items are included is based on the size of the orthogonal contribution of each independent variable to the variance accounted for in the dependent variable. Two outcome measures, parent performance as rated by the teacher and rate of child development as assessed with the Bayley Scales of Infant Development (Mental Scale) were used, consequently two sets of regression analyses were required.

The first multiple regression equation for each dependent variable was constructed using only cases from which no data was missing. In nine of the 42 cases, between one and three items were missing, due either to an oversight by the interviewer or because two items were added after several of the interviews had already occurred. In one case 11 items had to be replaced after a parent refused to cooperate in completing the Index of Consensus. One case was excluded from this and all further analyses because all father responses were missing. In two cases child development data was missing because the children were blind and the Maxfield-Bucholtz was deemed to be an inappropriate measure of developmental functioning.

The first multiple regression equation using maternal performance as the dependent variable was generated using 31 families on which no data was missing. In this regression equation maternal ranking of goals unrelated to family life and children was inversely related to the outcome measure and accounted for 26% of the variance associated with teacher ratings of performance. This value is statistically

reliable at $p < .01$. None of the other variables added significantly to the equation. However, adding father's locus of control score, father's priority for goals unrelated to family and children, mother's locus of control score and boundary permeability produced a multiple R=.61 which accounts for 37% of the variance. This result is statistically significant at $p < .05$. The results of this analysis are summarized in Table 10.

Table 10

Multiple Regression of Predictors of Maternal Performance
Cases with Missing Data Not Included[a]

Predictors	R^2
Average Task Goal-Mother	.26**
Average Task Goal-mother+ Father's I-E	.31
Average Task Goal-mother+Father's I-E + Average Task Goal-father	.34
Average Task Goal-mother+Father's I-E + Average Task Goal-father + Mother's I-E	.36
Average Task Goal-mother+Father's I-E + Average Task Goal-father + Mother's I-E + Boundary Permeability	.37

[a] $df=30$

** $p < .01$

A regression equation using child rate of development between the first and last testings on the Infant Development Scales as the outcome measure was generated using 30 cases from which no data was missing. Commitment to child care and infant development activities produced a

multiple R=.54 and accounted for 30% of the variance associated with the rate of child development. This finding is statistically significant at $p < .01$. None of the other variables added statistically reliable increments to the variance accounted for by the equation. However, the inclusion of mother's locus of control score, the family's boundary permeability and family's resources increased the multiple R to .60 and the variance accounted for to 36%. This result is statistically significant at $p < .05$. The results of this analysis are contained in Table 11.

Table 11

Multiple Regression of Predictors of Rate of Child Development
Cases with Missing Data Not Included[a]

Predictors	R^2
Commitment	.30**
Commitment + Average Task Goal-mother	.33
Commitment + Average Task Goal-mother + Mother's I-E	.35
Commitment + Average Task Goal-mother + Mother's I-E + Boundary	.36
Commitment + Average Task Goal-mother + Mother's I-E + Boundary + Resources	.36

[a] $df = 29$

** $p < .01$

A pair of regression equations were generated in a step-wise fashion, one for each of the two outcome measures. This analysis is different from the preceeding one in that in this analysis cases were included that had been excluded from the previous analysis because

they contained small numbers of missing items. The replacement of missing items was accomplished by substituting the mean of the family's responses on the scale to which the item in question belonged as the person's score for the missing item. Using maternal performance as the outcome measure, a regression equation was generated using 41 cases. Maternal priorities for family goals produced a multiple R=.49, which accounted for 24% of the variance associated with performance. This value is statistically significant at $p < .01$. None of the remaining variables produce a statistically reliable increase in the amount of variance accounted for by the equation. When father's ranking of family goals, family resources, consensus, mother's locus of control, family boundaries, and father's locus of control are added to the equation the multiple R=.59 and variance accounted for by the equation equals 35%. This result is statistically significant at $p < .05$. The details of this analysis are presented in Table 11.

Table 12

Multiple Regression of Predictors of Maternal Performance - Missing Data Replaced[a]

Predictors	R^2
Average Task Goal - Mother	.24**
Average Task Goal - Mother + Average Task Goal Father	.27
Average Task Goal - Mother + Average Task Goal Father + Resources	.29
Average Task Goal - Mother + Average Task Goal Father + Resources + Consensus	.32
Average Task Goal - Mother + Average Task Goal Father + Resources + Consensus + Mother's I-E	.33
Average Task Goal - Mother + Average Task Goal Father + Resources + Consensus + Mother's I-E + Boundary	.34

Table 12 - Continued

Average Task Goal - Mother + Average Task Goal Father + Resources + Consensus + Mother's I-E + Boundary + Father's I-E	.35

[a]df = 40

** $p < .01$

A multiple regression equation using the child's rate of development was generated using 41 cases including two cases in which child development data was missing. Only cases which contained complete child development data were counted in the degrees of freedom. The family measure of commitment to child care and program involvement produced a multiple R=.52 and accounted for 27% of the variance associated with the child's rate of development. This is statistically significant at $p < .01$. The remaining variables did not produce statistically reliable increases in the variance accounted for by this equation. The additions of boundary permeability, father's ranking of goals, mother's locus of control, father's locus of control and mother's ranking of goals raised the multiple R to .58 thus accounting for 33% of the variance. This is statistically significant at $p < .05$. The results of this analysis are summarized in Table 13.

Table 13

Multiple Regression of Predictors of Child Development - Missing Data Replaced[a]

Predictors	R^2
Commitment	.27**
Commitment + Boundary	.29
Commitment + Boundary + Average Task Goal - Father	.30

Table 13 - Continued

Commitment + Boundary + Average Task Goal - Father + Mother's I-E	.32
Commitment + Boundary + Average Task Goal - Father + Mother's I-E + Father's I-E	.32
Commitment + Boundary + Average Task Goal - Father + Mother's I-E + Father's I-E + Average Task Goal - Mother	.33

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[a] $\underline{df} = 38$

** $p < .01$

Homogeneity of regression across occupational levels was assessed in order to determine whether there is a need to generate a separate regression model for lower occupational status families. To test for homogeneity of regression across the low versus middle and high income groups, two regression models as recommended in Bottenberg and Ward (1963), were contrasted:

$$Y' = a_o + \sum_{i}^{3} a_i x_i$$

$$Y' = b_o + b_1 x_1$$

where X_1 = a measure of commitment

X_2 = 1 for occupational status levels 5,6,7

= 0 for occupational levels greater than 5

$X_3 = X_1 \cdot X_2$

(Bottenberg & Ward, 1963)

Where parental performance was the outcome measure the contrast yielded a non-significant test statistic ($F=.5$, $\underline{df} = 3/37$); the hypothesis of homogeneity of regression was not rejected. Where the rate of child development was the outcome measure, the contrast yielded a significant test statistic ($F=3.79$, $\underline{df} = 2/35$, $p < .05$). The assumption

of homogeneity of regression was not supported and it was necessary to analyze cases having low occupational status separately from the rest of the families. Of the 41 two-parent families, the six families having the lowest occupational scores were removed.

Data from the remaining 35 families were subjected to regression analysis with rate of development as the outcome measure, child development data was missing from one case. Commitment to child care and program activities produced a multiple R of .64 and accounted for 41% of the variance. This is statistically significant at $p < .01$. None of the remaining seven variables were added to the equation, a multiple R of .79 was obtained and this accounts for 63% of the variance associated with rate of development. This finding is statistically significant at $p < .01$. A more detailed presentation of these results may be found in Table 14. Further analysis on the six low occupational status families was not deemed prudent due to the small sample size.

Table 14

Multiple Regression of Predictors of Rate of Child Development
Missing Data Replaced - Middle and High Occupational Status[a]

Predictors	R^2
Commitment	.41**
Commitment + Boundary Permeability	.46
Commitment + Boundary Permeability + Consensus	.49
Commitment + Boundary Permeability + Consensus + Average Task Goal - Mother	.53
Commitment + Boundary Permeability + Consensus + Average Task Goal - Mother + Resources	.56

Table 14 - Continued

Commitment + Boundary Permeability + Consensus + Average Task Goal - Mother + Resources + I-E - Father	.60
Commitment + Boundary Permeability + Consensus + Average Task Goal - Mother + Resources + I-E - Father + Average Task Goal - Father	.63
Commitment + Boundary Permeability + Consensus + Average Task Goal - Mother + Resources + I-E - Father + Average Task Goal - Father + I-E - Mother	.63

[a] $df = 33$

** $p < .01$

In the preceeding analysis, commitment as reflected by maternal goal priorities or in terms of commitment to child care and program activities emerged as the most potent of the predictors utilized in this study. However it is important to determine whether these measures account for more variance than the social, economic and educational indicators routinely collected in most studies. In order to assess the relative potency of these measures as predictors of the rate of child development and of maternal performance, commitment, mother's goal priority, father's goal priority, income, father's occupational status, mother's educational attainment and father's educational attainment were entered into a regression equation in a step-wise fashion. Data from 41 families in which missing data had been replaced were used to generate an equation predicting maternal performance. In the resulting equation, mother's priority for goals unrelated to family life and child care retained it's position as the most potent of the predictors, thus indicating that it is a more powerful predictor than the social, educational and economic indicators. As in the earlier analysis

it produced a multiple R=.49 and accounted for 24% of the variance. Mother's educational attainment also added significantly to the regression equation, raising the variance accounted for to 35%. The remaining variables did not significantly increase the amount of variance associated with performance. The details of this analysis may be found in Table 15.

Table 15

Multiple Regression of Goal Priority, Commitment, Social, Educational, Economic Indicators to Predict Maternal Performance[a]

Predictors	R^2
Average Task Goal - Mother	.24**
Average Task Goal - Mother + Education - Mother	.33**
Average Task Goal - Mother + Education - Mother + Average Task Goal - Father	.36
Average Task Goal - Mother + Education - Mother + Average Task Goal - Father + Education - Father	.37
Average Task Goal - Mother + Education - Mother + Average Task Goal - Father + Education - Father + Commitment	.38
Average Task Goal - Mother + Education - Mother + Average Task Goal - Father + Edcuation - Father + Commitment + Income	.40
Average Task Goal - Mother + Education - Mother + Average Task Goal - Father + Education - Father + Commitment + Income + Occupation	.40

[a] df = 40

**p < .01

Data from the 35 higher occupational status families in which missing data were replaced was used to predict child rate of development.

Here as before, commitment retained its position as the most powerful predictor. Father's occupational status added significantly to the amount of variance accounted for by commitment. Together commitment and father's occupational status produced a multiple R=.69 and accounted for 48% of the variance associated with rate of development. The remaining variables did not add significantly to the equation's capacity to predict child development. The results of this analysis may be found in Table 16.

Table 16

Comparison of The Potency of Commitment, Boundary, Task-Goal Rating with Social and Economic Indicators as Predictors of Child Development[a]

Predictor	R^2
Commitment	.41**
Commitment + Occupation	.48**
Commitment + Occupation + Boundary	.53
Commitment + Occupation + Boundary + Average Task Goal - Mother	.54
Commitment + Occupation + Boundary + Average Task Goal - Mother + Average Task Goal - Father	.57
Commitment + Occupation + Boundary + Average Task Goal - Mother + Average Task Goal - Father + Education - Father	.58
Commitment + Occupation + Boundary + Average Task Goal - Mother + Average Task Goal - Father + Education - Father + Income	.58
Commitment + Occupation + Boundary + Average Task Goal - Mother + Average Task Goal - Father + Education - Father + Income + Education - Mother	.58

[a] df = 33
*p < .05
**p < .01

Discussion

All of the predictors used in this study evidenced satisfactory reliability levels. The relatively high test-retest reliability suggests that parent responses were generally stable over time despite such effects as motivation and improved familiarity with the child's handicaps. Most of the variables used in the analysis suffered from some degree of restriction of range. Of the family measures, commitment was least restricted. Scores obtained on measures of consensus, resources, boundary maintenance and parent goal rankings were highly restricted with relatively few families obtaining scores indicative of low family functioning. The outcome measure, teacher ratings of maternal skills suffered from severe restriction of range, while rate of change of child development was unaffected by this problem. The values of indicators of socioeconomic status were normally distributed and were not restricted.

Throughout the analyses, commitment to child care and program activities remained the most potent predictor of the rate of child development. Similarly, maternal rankings of goals unrelated to family and child goals was consistently the most potent predictor of teacher ratings of maternal performance. Both of these scales measure aspects of parental commitment. The first scale measures confidence in and involvement with child care and program activities. The second measure assessed maternal valuation of family and personal goals. Of the remaining family and parent variables under study, no one variable added

appreciably to the regression equations, neither was there a particular variable that consistently occupied the second position in the equations. It is likely, however, that had the sample been larger, some of the variables would have made statistically reliable contributions. Beyond this the two measures of commitment also proved to be more potent than any of the indicators of socioeconomic status. Two socioeconomic indicators added significantly to the equation. Father's occupation made a significant contribution to the equation predicting child's rate of development. Interestingly, occupation is uncorrelated with child's rate of development and is inversely correlated with commitment. Apparently occupational status functions as a suppressor variable in this instance, which is to say that it reduces the error variance by suppressing variance in commitment that is unrelated to the outcome measure. With regard to the prediction of maternal skill, mother's education made a significant addition beyond what mother's commitment as measured with the Index of Consensus was able to predict alone. Unlike the preceding situation, maternal educational attainment is correlated with performance and is not a suppressor variable.

Social status is frequently cited as a variable that has biased the results of studies that use intelligence scores as outcome measures. The Bayley, like other intelligence tests, may be biased toward middle-class learning. That such bias plays a role in the findings of this study seems doubtful, however, because all of the socioeconomic indicators have very low correlations with child's rate of development. It seems likely that occupational status' function in the analysis is to correct an error inherent in the measure of commitment that is related to socioeconomic class. This source of error may stem from a tendency of parents to voice greater enthusiasm about the program as their social

research commitment was operationalized in two different measures. A more general, theoretical approach to the study of commitment and incentives has been suggested by Klinger (1975). He argues that it is useful to think of an individual as commited to a goal when that goal exercises a controlling influence over his behavior. Klinger suggests that a person is generally commited to several goals. For example a parent may be commited to maintaining or improving his marital relationship, to providing recreation for his children and teaching his handicapped child self-feeding. Each of these ends to which the parent is commited constitutes a goal, because it is something to which he is attracted. When successful, people attain their goal; when unsuccessful, the process of striving ceases with disengagement from the goal. The repeated failure of efforts to attain a desired end will ultimately result in an abandonment of that goal and of the commitment to that goal. Social learning theory offers a similar perspective, arguing that repeated failure will result in a low expectancy for reinforcement and hence a low probability of engaging in an unrewarding activity (Rotter, Chance, & Phares, 1972).

Although theoretically interesting the practical importance of commitment is still more apparent, when working with a family that proves to be unmotivated to implement a home program. Klinger's (1975) and Rotter's (1972) theories suggest that lack of commitment to a child care activity is the result of a low valuation of the goal associated with the activity or the expectancy that the goal is unattainable. Thus the goal related incentives and the expectancy of attaining it are crucial to an understanding of commitment. Together these incentives and expectancies determine commitment and with it parental motivation.

non-threatening procedures that increased the frequency of enjoyable interactions within the family. Once this was done, it was possible to deal succesafully with the stealing. This study suggests that is is possible to motivate parents through the use of intrinsic reinforcements. The foregoing suggests that it is both possible and desirable to utilize intrinsic rewards to motivate parents.

Given that we wish to enhance the intrinsic rewards a parent derives from home program activities, we must next attempt to discern what makes an activity intrinsically rewarding. Notz (1975) has described several conditions that are thought to be required for intrinsic motivation. First, there is evidence that the degree to which an individual performing a task feels that the pursuit of the task provides personal satisfaction is related to feelings of intrinsic motivation. The satisfactions people derive from activities can be grouped into several categories on the basis of whether they result in the same or similar rewards (Rotter, Chance, & Phares, 1972). Rotter and his colleagues have identified several major groupings, which include among others, independence, recognition-status, and love and affection.

A second condition that facilitates intrinsic motivation can also be stated: the degree to which an individual feels that he has had both freedom to choose and to engage in an activity is related to feelings of intrinsic motivation. Conversely, where a parent feels that a task has been forced upon her or where she is uninterested in a task because she does not understand or believe the rationale for the activity, her intrinsic motivation will be low. In cases where parents do not understand the rationale for the intervention it can be explained to them.

Where parents feel they have not had enough freedom of choice, they can be given a greater role in the design of their child's program.

Finally, personality factors may also influence the interactions between intrinsic and extrinsic motivation. Some people may be more likely to be intrinsically motivated than others. Just as some persons are more susceptible to intrinsic motivators than others, so too may they differ as to their expectations for goal attainment.

Motivational theory assumes that commitment to child related activities depends on the belief that goals associated with those activities are attainable. According to theory, commitment leads to goal directed activities which are maintained by the likelihood of goal attainment. Repeated failure to attain a goal ultimately leads to a decline in activity and disengagement from commitment. This is thought to be true regardless of whether failure to achieve the desired end is due to the unrealistic nature of the goal or because goal directed efforts are made impossible by circumstances. In this way circumstances and the child's development affect the incentives that are available and parental expectancies of attaining them.

The earliest incentives associated with child related goals derive from the attachment of parent and infant. In time, parental goals regarding child development broaden to include self-help skills, language and various other behaviors which have the effect of increasing the child's independence and decreasing the parent's burden. In the case of the handicapped child, expectations for the child's achievement of certain normative developmental goals may be unrealistic. In areas in which the child develops slowly, parents will experience considerable difficulty if they are striving to have their youngster achieve normatively defined developmental milestones on the typical child's

schedule. It is likely that parents who cannot define goals that they and their child can achieve, will develop low expectancies for the attainment of child related goals and begin to display frustration, depression and perhaps terminate their efforts to enhance the child's development. Similarly, where a parent has a strong need for love and affection from her child, but a low expectancy of obtaining this from her handicapped child, she will be frustrated and presumably less likely to carry out the prescribed activities. Such a situation could easily arise when a parent has normal expectations regarding demonstrations of affections and so fails to recognize signs of affection that her severely handicapped child may display. A possible solution to this problem would consist of teaching the parent to discriminate and accept more subtle displays of affection and love. This discrimination would be reinforced by the child's expression of affection and as a consequence, parental expectations for affection should increase along with willingness to work with the child. Obviously a variety of parent and child characteristics affect parental commitment. Unfortunately, the relative potency of these influences on parent commitment cannot be determined at this time. It is expected that a more extensive understanding of what motivates parents to care for their handicapped children will clarify these questions and enable us to develop more effective and humane ways of encouraging fruitful parent-child interactions.

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Appendix A

Parent Interview Measures

Constructed For This Study:

Boundary Permeability
Resources
Consensus
Commitment

Boundary Permeability:

1. Did someone from your home or family call here to schedule your first visit?

2. Have you been in contact with any service agencies or organizations during this past year?

3. Have you moved during the last year?
   If "yes", how many times?

4. Have any friends or relatives lived with you, or you lived with them for a month or longer during the past year?

5. Do you feel that you have the final say over the programs, services, and activities your child receives?

	Very Much	Pretty Much	Some	A Little	None At All
Mother:	1	2	3	4	5
Father:	1	2	3	4	5

Resources:

6. Who is the primary wage earner in the family?
   Determine % of income from each if both work.

7. Total gross income (ask primary wage earner or both if other earns 40% of total):

   a. Under $3,000
   b. $3,000 - 6,000
   c. $6,000 - 9,000
   d. $9,000 - 12,000
   e. $12,000 - 15,000
   f. $15,000 - 18,000
   g. $18,000 - 21,000
   h. $21,000 - 24,000
   i. $24,000 - 27,000
   j. $27,000 and over

8. a. Educational level attained by each parent in the home:
      Mother -
      Father -

   b. Occupation of each parent in the home:
      Mother -
      Father -

9. Number of others in home who need to be cared for:

Interview Parents Separately

10. How much physical help do you get from the following sources: (ask primary caretaker)

		Very Much	Pretty Much	Some	A Little	None At All
a.	Babysitter	1	2	3	4	5
b.	Day care	1	2	3	4	5
c.	Relatives/family	1	2	3	4	5
d.	Husband/wife	1	2	3	4	5
e.	Children	1	2	3	4	5
f.	Neighbors/friends	1	2	3	4	5
g.	Other	1	2	3	4	5

11. How much encouragement and praise do you get from the following: (ask primary caretaker)

		Very Much	Pretty Much	Some	A Little	None At All
a.	Husband/wife	1	2	3	4	5
b.	Relatives	1	2	3	4	5
c.	Neighbors/friends	1	2	3	4	5
d.	Children	1	2	3	4	5

12. What percent of your child's care do you do?

0% - 10%
11% - 20%
21% - 30%
31% - 40%
41% - 50%
51% - 60%
61% - 70%
71% - 80%
81% - 90%
91% - 100%

13. How satisfactory is the distribution of labor?

	Very	Pretty	Somewhat	Not Very	Not At All
Mother:	1	2	3	4	5
Father:	1	2	3	4	5

14. Do you have much energy left by evening?

	Very Much	Pretty Much	Some	A Little	None At All
Mother:	1	2	3	4	5
Father:	1	2	3	4	5

15. How much love and affection is there in your home?

	Very Much	Pretty Much	Some	A Little	None At All
Mother:	1	2	3	4	5
Father:	1	2	3	4	5

16. How would you rate your physical health?

	Excellent	Above Average	Average	Below Average	Poor
Mother:	1	2	3	4	5
Father:	1	2	3	4	5
Client:	1	2	3	4	5
Others In Home:	1	2	3	4	5

17. How would you rate your emotional health?

	Excellent	Above Average	Average	Below Average	Poor
Mother:	1	2	3	4	5
Father:	1	2	3	4	5

Commitment:

18. How much do you agree with this statement: Professionals should do most of the work with children who have special problems instead of involving the parents.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Mother:	1	2	3	4	5
Father:	1	2	3	4	5

19. How much do you agree with this statement: I feel that (this baby) because of his/her problems takes too much time away from others in the family.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Mother:	1	2	3	4	5
Father:	1	2	3	4	5

20. How much do you agree with this statement: Infant Development Program teachers can't be much help to parents.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Mother:	1	2	3	4	5
Father:	1	2	3	4	5

21. About how much time per day do you spend with your child playing (and working on Infant Program activities)?

Mother:
Father:

22. About how much free time do you have to do what you enjoy? (on non-working days if parent works)

Mother:
Father:

23. Overall, how delayed do you think you child is?

	Very Delayed	Pretty Delayed	Somewhat Delayed	Slightly Delayed	Not At All Delayed
Mother:	1	2	3	4	5
Father:	1	2	3	4	5

24. What specific thing would you like to see your child doing in the next three months or so?

Mother:
Father:

25. How sure do you feel that your child will learn to (short term goal, #25)?

	Very Sure	Somewhat Sure	Not Too Sure	Somewhat Doubtful	Very Doubtful
Mother:	1	2	3	4	5
Father:	1	2	3	4	5

26. How important are the things you can do to help him/her learn to (short term goal, #25)?

	Very Important	Pretty Important	Somewhat Important	Not Too Important	Not At All Important
Mother:	1	2	3	4	5
Father:	1	2	3	4	5

27. How important are the things your child's teacher can do to help him/her learn to (short term goal, #25)?

	Very Important	Pretty Important	Somewhat Important	Not Too Important	Not At All Important
Mother:	1	2	3	4	5
Father:	1	2	3	4	5

28. What specific things would you like to have your child doing three or four years from now?

Mother:
Father:

29. How sure do you feel that your child will learn to (long term goal, #29)?

	Very Sure	Somewhat Sure	Not Too Sure	Somewhat Doubtful	Very Doubtful
Mother:	1	2	3	4	5
Father:	1	2	3	4	5

30. How important are the things you do to help him/her learn to (long term goal, #29)?

	Very Important	Pretty Important	Somewhat Important	Not Too Important	Not At All Important
Mother:	1	2	3	4	5
Father:	1	2	3	4	5

31. How confident are you that your child's teacher (will do, is doing) a good job with your child?

	Very Sure	Pretty Sure	Somewhat Sure	Not too Sure	Not At All Sure
Mother:	1	2	3	4	5
Father:	1	2	3	4	5

32. Are you interested in knowing about what goes on during your child's Infant Program visits?

	Very Interested	Pretty Interested	Somewhat Interested	Not Too Interested	Not At All Interested
Mother:	1	2	3	4	5
Father:	1	2	3	4	5

33. In general, how satisfied are you with the services your child has received this far? (Including medical care as well)

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
Mother:	1	2	3	4	5
Father:	1	2	3	4	5

Consensus:

34. How well does your husband/wife understand your child's problems?

	Very Well	Pretty well	All Right	Not Too Well	Not At All
Mother:	1	2	3	4	5
Father:	1	2	3	4	5

35. All people have their own ideas about the best way to do things. How much do you agree with the way your husband/wife takes care of (your child)?

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Mother:	1	2	3	4	5
Father:	1	2	3	4	5

36. How much do you agree with the following statement: When a baby has a special problem, his father should be expected to learn about special ways of taking care of him.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Mother:	1	2	3	4	5
Father:	1	2	3	4	4

37. How much do you agree with this statement: There is bound to be trouble when husbands and wives do the same kinds of program activities with their child.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Mother:	1	2	3	4	5
Father:	1	2	3	4	5

38. How much do you agree with this statement: Because (child's name) is handicapped, my husband/wife and I share the work of raising (child's name) more than if he/she were not handicapped.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Mother:	1	2	3	4	5
Father:	1	2	3	4	5

Appendix B

Family Goals

Family Goals

Read this list.

What are the family goals that are most important to you?

Show which of the following goals is most important by placing a 1 next to it. Place a 2 beside the one that is the next most important goal to you, a 3 next to the third most important goal, and so on for all 10 items.

Goals:

A place in the community. Giving family members a respected place in the community . . . . . ____

Happy children. Helping the children to become well adjusted and enjoy their lives . . . . . ____

Emotional security. Feeling that family members can go to each other when things are bothering them and that they can trust each other . . . . . ____

Affection. Having family members statisfied with the amount of love they give to each other . . . . . ____

Economic security. Keeping up or improving the family's standard of living . . . . . ____

Personal development. Giving each family member the opportunity to develop as an individual . . . . . ____

Companionship. Having family members enjoy doing things together and feel comfortable with each other . . . . . ____

Religion. Living according to religious principles and teaching . . ____

Wise financial planning. Making sound decisions in budgeting for present and future purchases, and making intelligent use of money . . . . . ____

Attractive home. Having a place which is comfortable and attractive to live in . . . . . ____

Appendix C

Locus of Control

I'm going to read some questions now, each of which has two parts, a and b. I'd like you to tell me for each question which you believe is more true. In some cases you may believe both are true or neither part is true. But for each question I'd like you to choose the part, a or b, which you believe is more true.
Okay? (Circle a or b)

1a. I have often found that what is going to happen will happen.

b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.

2a. What happens to me is my own doing.

b. Sometimes I feel that I don't have enough control over the direction my life is taking.

3a. When I make plans, I am almost certain that I can make them work.

b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.

4a. In my case, getting what I want has little or nothing to do with luck.

b. Many times we might just as well decide what to do by flipping a coin.

5a. Many times I feel that I have little influence over the things that happen to me.

b. It is impossible for me to believe that chance or luck play an important role in my life.

Appendix D

Program's Reinforcement Value Constructed for this Study

Here are some things that other people have said about how they <u>really feel</u>. Please read these and indicate how you feel. Tell us if you completely agree, strongly agree, agree, not sure, disagree, strongly disagree, completely disagree, by circling the number underneath the one that tells how you feel.

	1 Completely Agree	2 Strongly Agree	3 Slightly Agree	4 Slightly Disagree	5 Strongly Disagree	6 Completely Disagree
1. I enjoy meeting parents of other children in the Infant Program	1	2	3	4	5	6
2. The home activities I am given to do with my child seem like hard work.	1	2	3	4	5	6
3. I enjoy talking to my child's teachers.	1	2	3	4	5	6
4. My child's teachers are interested in what I tell them about my child.	1	2	3	4	5	6
5. I have very little to say about what my child is taught	1	2	3	4	5	6
6. The teachers care about the children.	1	2	3	4	5	6
7. The Infant Program can have a bad effect on family life.	1	2	3	4	5	6
8. Things I have learned from the program's staff have reduced my wories about the future.	1	2	3	4	5	6
9. The things the teachers tell me make me swear that I am doing the right things with my child.	1	2	3	4	5	6
10. The Infant Program can get in the way of being a good parent.	1	2	3	4	5	6

Appendix E

Maternal Performance Rating Scale

Please consider your interaction with the parent(s) of the children with whom you are working and rate them according to the following scale:

5. Parent and child attend regularly with missed sessions only due to illness or some similar circumstance, parent brings any information requested (data, goal sheets, etc.). Child is generally in good physical condition (clean, not hungry, etc.) for sessions. On the basis of your subjective judgement you feel that programs are carried out at home as prescribed (frequency and method) with great consistency. A rating of 5 should be assigned to such a parent.

4. Parent and child attend regularly with missed sessions only due to illness or some similar circumstance. Parent needs some reminding in order to get information requested (data, goal sheet). Child is generally in good physical condition for sessions. On the basis of your subjective judgement, you feel that programs are carried out at home as prescribed (frequency and method) most of the time, but occasionally does not, without reason - such as illness. A rating of 4 should be assigned to such a parent.

3. Parent and child attend with some regularity but not all missed sessions are accounted for on the basis of illness, inclement weather, etc. Parent needs frequent reminders for information requested (data, goal sheets). Child is generally in good physical condition. On the basis of your subjective judgement, you feel that programs are carried out at home only occasionally. A rating of 3 should be assigned to such a parent.

2. Parent and child infrequently attend sessions, parent typically does not supply information requested (data, goal sheets). Child frequently appears in poor physical condition (unkempt, dirty, frequent colds). On the basis of your subjective judgement, you feel that programs are only occasionally carried out at home. A rating of 2 should be assigned to such a parent.

1. Parent and child infrequently attend sessions, parent never supplies information requested, child is typically in poor physical condition. On the basis of your subjective judgement you feel that programs receive no carryover at home. A rating of 1 should be assigned to such a parent.

Appendix F

Area Paper

Effects of Social Variables on Parent Behavior and Home Intervention

During the past decade there has been a trend toward early intervention with developmentally at risk children (Caldwell, 1971). At the same time there has been a trend toward increased participation of parents in interventions with their children (Berkowitz & Graziano, 1972); O'Dell, 1974; Stedman, 1974). This paper will, first, provide an overview of the characteristics of programs for developmentally disabled children, with an emphasis on those relying on parents to implement the intervention. Secondly social variables which influence the outcome of parent mediated interventions will be discussed. Finally the beginnings of a framework for organizing these variables will be offered.

Characteristics of Programs

At present there are two major approaches common to the field of early intervention. Some programs focus professional efforts on the child; generally this occurs in day care centers, schools, and clinics, (Heber & Dever, 1970; Patterson, 1971; Robinson & Robinson, 1971). In the other approach, professionals teach parents skills intended to be used by these parents with their children (Finney, 1968; Gordon, 1969; Karnes, Teska, Hodgins & Badger, 1970; Levenstein, 1970; O'Dell, 1974; Patterson, 1971, 1974; Shearer & Shearer, 1976; Weikart & Lambie, 1968).

These types of parent programs may be differentiated from one another on the basis of whether they emphasize developmental and educational content, behavioral procedures for shaping a child's behavior or reflective counseling for the modification of parental feelings and attitudes. Historically interventions emphasizing behavioral procedures have their origins in operant psychology and were initially introduced to parents through behavior management programs dealing with "conduct disorders" (Becker, 1971; Berkowitz & Graziano, 1972; Holland, 1970; O'Dell, 1974; Patterson & Guillion, 1971; Tharp & Wetzel, 1969). Content oriented programs tend to have been founded to provide educational services. They also tend to utilize curricula derived from various cognitive and developmental theories (e.g. Gordon, 1969; Gray & Klaus, 1970). Programs which utilize reflective counseling have their roots in nondirective and psychodynamic theories. There will be no further discussion of this school in this review, interested readers are referred to a recent review by Tavormina (1974).

Of late there has been a growing recognition of the limitations inherent in the purer forms of the content or behavior management oriented approaches. For example, behavior modification is, strictly speaking, no more than a set of principles about the determinants of performance and techniques which permit the modification of behavioral performances (e.g. Holland, 1970), thus behavior modification techniques provide little in the way of criteria for the selection of the behaviors to be shaped, or for the sequence in which selected behaviors are to be developed (MacMillan & Forness, 1974). As a consequence the procedures by which target behaviors are selected tend to be ill defined and somewhat intuitive. In contrast to programs lacking criteria as to the selection of behaviors to be taught, are programs which emphasize content, without describing procedures by which such content is presented. The success of these programs is sometimes limited by their failure to make use of shaping and behavior management techniques. This is exactly the situation found when a teacher or parent use a curriculum demonstrated to be adequate but fail in developing desired behaviors because of lack of control over the child. To remedy the weaknesses of these two approaches, some investigators (Anastasiow & Mansergh, 1975; Bricker & Bricker, 1971; Drash & Leibowitz, 1973; Robinson & Fieber, 1974) have suggested that operant procedures be used in conjunction with theoretical and empirical guidelines, regarding sequences of development. In this way behavior modification provides the technology for producing new responses, while empirical and theoretical information provide the rationale for selecting the responses to be shaped. Guidelines for cognitive development have been found in the work of Piaget, who has produced valuable descriptions and concepualizations of the

organization of cognitive development (Anastasiow & Mansergh, 1975; Hunt, 1961; Robinson & Fieber, 1974; Uzgiris & Hunt, 1975). In recognition of the desirability of utilizing operant and developmental principles several programs are systematically combining these two approaches in the development of their curricula (Bricker & Bricker; 1971; Robinson & Fieber, 1974; Shearer & Shearer, 1972; Wiekert & Lambie, 1968).

Research on the efficacy of early intervention programs permits some conslusions regarding their utility. There is ample data to indicate that day care and nursery school interventions which emphasize intellectual development and use IQ scores as the dependent measure, have generally demonstrated at least short term gains in favor of children in the experimental groups over children in control groups (e.g., Gordon, 1969; Weikark & Lambie, 1968). Clinic and school interventions with "misbehaving" children have been shown to produce changes in child behavior (Patterson, 1971, 1974) but as a rule these treatment effects have not generalized to other, unprogrammed, settings such as the child's home (Patterson, 1974; Wahler, 1972; Walker & Buckley, 1972). Hence it is generally agreed that there is a need to reprogram the home by training the child's parents to respond in ways that diminish undesirable behavior and enhance development. In general, studies of home programs have shown home programs to be developmentally valuable (e.g., Gordon, 1968; Shearer & Shearer, 1976) and to be effective in reducing undersirable child behavior (e.g., O'Dell, 1974; Patterson, 1971, 1974).

Comparisons of the differential effectiveness of these various approaches have been quite limited. Published comparisons between

interventions carried out by parents and interventions conducted by professionals are few in number and do not yield clear cut results. In a discussion of the relative programs Karnes notes that published reports indicate that similar gains are reported for the two types of programs(Karnes, Teska, Hodgins, & Badger, 1970). Barbrack(1970) contrasted the effectiveness of cognitive home training that involved mothers with another program that did not permit maternal input during child tutoring sessions. After a short intervention period, small but reliable changes were found in both treatment groups on the Metropolitan Readiness Test while non-treatment controls did not demonstrate statistically reliable changes in behavior. The child-oriented preschool treatment condition produced significantly higher levels of child academic performance than the mother involved condition; the mother involved condition was significantly more effective in modifying maternal teaching style. Had the intervention lasted longer the improvement in maternal skills might have been increasingly effective in improving child performance. Radin (1972) studied the effect of three levels of maternal involvement with their child's preschool progran on child intellectual performance. All children were enrolled in a preschool and all received biweekly home visits by a teacher. Mothers in the involvement condition (groups A and B) were specifically involved in home tutoring sessions. In addition mothers in A were invited to attend weekly group discussions of child rearing and child development. Mothers in group C did not participate in the home tutoring group sessions. Total time spent tutoring was close to 11 hours for all groups. Immediately after the program's termination, children in all groups showed significantly increased

scores on the Peabody Picture Vocabulary Test, with no differences amont the three groups. Upon retesting after a lapse of one year the "mother involved in tutoring only" condition's(group B) mean Peabody Picture Vocabulary Test score was significantly greater than the mean of group C, the non-involvement condition. Moreover, the mean gain scores for groups A (+9.7) and B (+14.0) were found to be positive and significantly greater than the mean change score of group C (-1.0). Thus it would appear that even relatively small amounts of maternal involvement with home teaching activities can improve maternal teaching abilities and have a stimulating influence on the development of their children's abilities.

Research on the differential effectiveness of various parent training formats has been limited in both behavior management (O'Dell, 1974) and in the more educationally oriented programs. Baker and Haifetz (1976) have explored the differential effectiveness of several training strategies. They have attempted to equip parents with skills to teach their retarded children in the areas of self-help, and behavior management. Parent skill acquisition and child gains were compared across five training conditions: (1) training manuals alone with no supervision, (2) manuals plus phone consultations, (3) manuals plus group training meetings and phone consultation, (4) manuals, group training, and home visits, and (5) no training for the duration of the study. In each training condition gains in child self-help skills were significant ($p < .001$) and significantly greater ($p < .01$) than for control children. Differences in gains among the four training conditions did not approach significance. Of these behavior changes half were specifically programmed by parents. The other half were the products of generalization

and were not specifically programmed. Unprogrammed self-help skill acquisition was significant in all conditions ($p = .001$); the only condition significantly different from controls was the "manuals only group" ($p = .002$). The authors suggest that highly motivated mothers may be more effective teachers of specific self-help skills when they work alone and without supervision. For behavior management outcome criteria, which included measures of the amount of programming, record keeping, parent evaluations and child behavior change, suggested that the direct supervision condition produced results superior to conditions where there was limited parent-trainer contact. With regard to changes in child behavior only the "manuals, group and visit" condition was superior to the controls ($p = .07$) and significantly superior to the other experimental conditions combined ($p = .025$). The authors suggest that the teaching of specific self-help skills lends itself to the use of manuals, while the management of behavior problems entails the accomodation and application of general principles to individualized situations in a less stereotyped manner than is available through a manual.

The circumstances under which professional contact with the child is to be preferred to a parent training approach are still matters requiring more definitive investigation. Obviously the ability and willingness of the parents to learn and implement the procedures associated with the child's treatment plan will enter into the choice.

One consideration as to how a program may best be provided, might be the complexity of the procedures to be used which, in turn, determine the time and effort required for the parent to become proficient in a technique or subject matter. The range of applicability of the

procedure to the child's overall development is another factor. Complex and highly specialized training procedures such as the toilet training method of Foxx and Azrin (1973) are probably most efficiently implemented by experienced technicians. Procedures applicable to a wider number of potential training situations, such as the use of differential reinforcement for selected behaviors or learning that requires much repetition, such as language and motor training activities are probably more economical when utilized by parents than by professionals.

Yet another factor affecting consideration of a parent to carry out programs has been the parent's adjustment. Parents having very severe personal problems frequently have serious difficulties implementing home programs with their children (Fraiberg, 1975).

A benefit of teaching parents techniques that are applicable to a wide range of child rearing situations should be the generalizability of those techniques to other problems of the target child, as well as, to other children in the home. In fact, the transfer of parental behavior changes from clinic to home and across different child problems is frequently considered to be the essential criterion of a successful behavior management intervention (O'Dell, 1974). The generalization of appropriate techniques and activities is very desirable because the returns on expenditures for taining a parent increase as changes in parent behavior results in improvements in child performance for more than the original problem behaviors, and where this learning is applied to more than the target child. Conversely training becomes relatively more costly where procedures become increasingly limited as to the situations to which they may be applied. There are some data which

indicate that generalization in the use of educational techniques and content learned by mothers may be an important factor in the intellectual growth of siblings and peers of children in a program that combined preschool, home visiting and parent training (Gray & Klaus, 1970). Gray and Klaus suggest that generalization of parent learning from an educational program can occur in two ways; mothers may utilize their new knowledge and techniques on other children in the family and they may also transfer newly acquired skills to their neighbors.

Data from behavior management programs indicate that learning often does not generalize from one child's problems to another, and that procedures to insure generalization must be included in their training program (Patterson, 1971, 1974). Although this phenomenon has been discussed the parameters affecting it remain unclear.

On the whole there is evidence to suggest that parents can be successful in modifying their child's behavior in the context of educational or behavior management interventions. However, there is also evidence that ordinarily successful intervention procedures fail to produce changes in child behavior in certian families (Barbrack, 1970; Ferber, Keeley & Shemberg, 1974; Patterson, 1971; Patterson, Cobb & Ray, 1973; Reid & Hendricks, 1973; Tharp & Wetzel, 1969; Wahler, 1972). As a consequence, there is a need to predict parental performance on a case by case basis in order to determine the level of professional involvement required by a family. Unfortunately, the factors affecting parental performance are not well understood.

Little systematic study has been devoted to explaining the varying degrees of success and failure observed when individual cases are

compared. Recent reviews of parent training efforts contain few references to studies which consider the effect of variables which might be classified as parent or family characteristics (O'Dell, 1974; Tavormina, 1974). Rarely have household and parent characteristics been evaluated to determine how these interact with a curriculum or technology to produce variability in the outcome data.

Social Variables

In order to account for parental therapeutic effectiveness it will be necessary to identify those factors affecting mastery of therapeutic skills by individuals as well as those factors affecting parental willingness and capacity to learn and administer therapeutic techniques. To date no comprehensive model has been offered that encompasses the training and use of parents as therapists with their own children. However, it is obvious that certain domains may be considered when attempting to account for the success or failure of a home program. Such areas include the parent-professional dyad, parent-child factors, household and family characteristics, professional and parental teaching skills, curriculum, the parent training format, as well as interrelationships among these variables. This paper will limit itself to critically reviewing social interaciton and social setting variables. A framework which permits the organization of the information in these two areas and the specification of classes of activities and conditions hypothesized to be required for the successful acquisition and utilization of intervention procedures will be presented in order to avoid a haphazard approach to answering questions regarding the efficacy of parents as teachers. To this end principles of social learning theory (SLT) will be presented as components of a framework for analyzing parental behaviors.

Social Learning Theory Concepts

Expectancy for success or failure in a situation and the reinforcement

value of the success or failure experienced in that situation are essential concepts in social learning theory (Rotter, Chance and Phares, 1972). Both expectancies and reinforcement values are thought to be determined by the individual's past experience. Within SLT, it is assumed that reinforcements differ in value and that a reinforcer is defined as an event that changes the probability of occurrence of a given behavior. Associated with the implementation of a home program may be such negative reinforcers as the expenditure of time, effort and money without obtaining changes in child behavior. Positive reinforcers received through parental efforts may include improvement in child performance and praise from professionals. It is suggested that reinforcement is a major factor both in the teaching of parents and children and in the maintainence or discontinuation of a program by a parent.

Reinforcement. In succeeding passages reinforcement will be related to behavior changes induced by social influence and through modeling. The role of reinforcement in the social influence process will be inferred from studies which have tended to focus on attractiveness, which is one person's subjective evaluation of another individual's potency as a social reinforcer. Reinforcement will be directly related to the effectiveness of modeling. Finally considerations of reinforcements and punishers will be shown to be valuable in explaining instances in which programs are abandoned.

The training of parents by professionals has received scant attention. Nevertheless, useful information about the influence process by which parents are trained may be found in literature on teacher-student and therapist-client dyads, as these dyads have been

more extensively studied and because they have certain essential characteristics in common with the parent-professional dyad. The teacher-student dyad and the therapist-client dayd are similar to the parent-professional dyad in that participation in these dyads is voluntary, either member may terminate the relationship at any time. These relationships also share with each other the fact that compliance with a curriculum, regimen, home program or self-modification program cannot be enforced (Davison, 1973). Another commonality in these relationships is the asymmetry which stems from the parent's, client's or student's dependency on the professional for information and direction. Thus it is argued that data on dyads consistent with this model that have been generated in the medical, educational, and psychotherapy literatures can supplement information known about parent-trainer variables, particularly as they are related to how the trainer may influence parent behavior in prescribed directions.

In a discussion of the influence process in behavioral therapies, Kanfer & Phillips (1970) write that the field has been slow to study the characteristics of the behavior shaper. They argue that this oversight stems from a failure to recognize that the reinforcer's characteristics affect the reinforcement's potency and so may influence the outcome of the intervention. In teaching (Bidwell, 1973) and in psychotherapy (Goldstein & Simonson, 1971) some researchers have grounded their theorizing about the influence process in the finding that the more attracted A is to B, the more A is willing to be influenced by B (Back, 1951). Given this finding, they offer attraction as a basis for interpersonal influence. By analogy it is suggested that the more attracted the parent is to the professional the more potent will

be the professional's social reinforcements and consequently the more open the trainee will be to professional efforts to modify his behavior.

Goldstein and Simonson (1971) have generated correlational support for the association of attraction and influence in psychotherapy. Specifically they found "when patient attraction to therapist is high, the patient (a) is less covertly resistive, (b) talks more, (c) is self-descriptively sicker, and (d) has more favorable prognostic expectancies for himself" (p. 164). It was also found that the more attracted the patient is to the therapist, the more the therapist likes the patient. In this study the author reported that the more attracted the therapist is to the patient (a) the more the patient talks (b) the more open he is in the content of his communications and (c) the less covertly resistive he is. Thus, patients who are rewarded through the interpersonal attraction are more cooperative patients. Perhaps parents who are rewarded in like manner are also more open to change in the desired directions.

The question as to whether such therapist variables as warmth, empathy and genuineness influence the outcome of behavioral interventions has been raised (Hamerlynck, 1973). The work of Truax and his colleagues shows that high levels of these variables are positively associated with client improvement while lower levels are associated with failure to modify client behavior (Truax & Mitchell, 1971). Most directly relevant to parent training is the finding that college instructors' evidencing higher levels of warmth, empathy and genuineness obtain better results from their students than do teachers possessing lower levels of these variables (Truax & Mitchell, 1971). The mechanism

by which these factors influence behavior is unclear. Truax and Mitchell (1971) suggest that these characteristics are sought by clients and that varying levels of these may be used by therapists as reinforcements with which appropriate patient behaviors are rewarded.

A major component of the training of parents occurs through the modeling of desired parent behavior by a trainer (O'Dell, 1974). Here, as with shaping and didactic training techniques, the reinforcements available in the training situation influence the intervention's outcome. As of yet variables affecting the potency of modeling have not been studied extensively with regard to parent training. In general, however, the extent to which observers will be influenced by a model has been demonstrated to depend upon several variables. Most important is the finding that the performance of the modeled behavior will be deterred or facilitated depending on its consequences for the model and the reinforcements directly experienced by the observer (Bandura, 1971).

Model characteristics have also been found to influence observer behavior. Models who possess high status in power, prestige, and competence are emulated more than models possessing these characteristics in lesser degrees. In this connection it is interesting to note that a model's perceived status tends to increase or decrease depending on whether the model's efforts are rewarded or punished (Bandura, 1971). A model's capacity to influence behavior is also affected by his attractiveness to the observer. For example, individuals who are warm and nuturant generally elicit more spontaneous imitative behavior than models lacking these qualities (Bandura, 1971).

Bandura (1971) minimizes the importance of model characteristics. He argues that these are weak and can be reversed by manipulating the

reinforcing consequences associated with the observer's performance of the modeled task. He concludes that the observation of a model being rewarded and the direct experience of reward in connection with performance are of primary importance in motivating the observer. The foregoing suggests that parental perceptions of the extent to which a parent trainer is successful in working with a child will be closely related to the trainer's potency as a model.

In the above paragraphs, reinforcement in training situations has been reported to be a potent factor in the modeling and behavior shaping processes by which persons learn new behaviors. It is suggested that these same factors are involved in the process whereby parents learn techniques for use with their children. Moreover, it is quite likely that the reinforcements experienced in the performance of prescribed tasks will determine parental continuance of a home program. In fact, a basic assumption of most programs is that improvements in a child's performance will function as positive reinforcements for the maintenance of the program, once the professionals are no longer available as sources of reinforcement for parent successes.

Exceptions to the assumption that parents experience improvements in child functioning as rewarding are probably rare. None the less, exceptions do occur. On occasion behavior modification procedures have seen subverted by parents to produce a punitive and non-therapeutic environments (Tharp & Wetzel , 1969; Reid & Hendricks, 1973). Tharp and Wetzel (1969) report an instance in which:

> A very seriously predelinquent adolescent boy had repeatedly engaged in fist fights with his stepfather. The stepfather had hated the child for years. After four weeks of a closely proctored

> intervention plan, the boy's misbehavior was rapidly decreasing. The father, fearful that the boy might stay in the home if he reformed, disobeyed every instruction which our staff gave him. The case disintegrated; the boy ran away. It was very clear that the boy's continued presence in the home was so punishing to the father that the rewards our staff offered him - praise, encouragement, attention - were swamped. (p. 131)

It is also possible to conceive of situations in which a parent might intentionally jepordize the success of an educational program. Theorists of illness behavior (Mechanic, 1972; Waitzkin, 1971) and of behavior disorders (Haley, 1973) argue that therapeutic regimens will be opposed where rehabilitation will produce changes not desired by family members. Such changes might include the loss of income, such as disability payments (Waitzkin, 1971; Haley, 1973; Tharp & Wetzel, 1969), transportation (Waitzkin, 1971), or the elmination of justifications for removing a child from the household (Reid & Hendricks, 1973; Tharp & Wetzel, 1969). A program may also suffer if its execution requires a parent to adopt a behavior pattern which is incompatible with a behavior pattern or role already held (Berger, 1974; Buktenica, 1956; Lazar & Chapman, 1972; Mercer, 1966). For example in one instance workers attempted to shape eye contact in Navajo children. This effort failed because traditional Navajo culture prohibits sustained looking at another person. Consequently, the children with this learning history found counselor attempts to shape this behavior highly aversive (Goldstein, 1974). The prevalent reports of non-involvement of fathers in home programs may in part be due to just such conflicts. In a discussion of intervention programs for retarded children Stedman(1974)

observes that, as a rule, it is difficult to involve fathers in a program.

While concerted efforts to involve fathers have probably been infrequent, some have been reported. Lindsley (1966 cited in Patterson, 1971) made a specific effort to train fathers in behavior modification. He reported that of the original 24 fathers, only 14 completed the training program, but gave no reason for this attrition. Lazar and Chapman (1972) reported one instance in which fathers were involved; they increased play with their children as a result of consultation with male home visitors. However, visits geared to fathers were discontinued when it was found, through parent feedback, that the roles of playmate and head of the household conflicted. Instead fathers met as a group and worked on community problems and planned activities for mothers and children.

Expectancy. Basic to Rotter's system is the axiom that a person's expectancies for reinforcement through an activity are directly related to the probability that the individual will engage in that activity. Similarly, it is likely that parental expectancies can be shown to be related to the implementation of home programs by parents.

Expectancies enter into the seeking of professional assistance by parents, prior to the establishment of a professional-client relationship. It appears likely that expectancies linked to socioeconomic status are at least partly responsible for the finding that SES is directly related to the utilization of physicians services (Hyman, 1970; Morris, Hatch,& Chipman, 1966). Morris et al, (1966) found that mothers having feelings of powerlessness and isolation were more prevalent at lower class levels and that these feelings were associated

with failure to use illness prevention services for their children. These studies point to discontent with the medical system and perhaps society in general as being responsible for the lower utilization rates associated with low socioeconomic status. Such discontent implies low expectancies for reward through contacts with medical settings and may inhibit the usage of non-medical professional services for children by low income parents. This pattern is repeated with regard to the use of mental health services. Hollingshead and Redlich (1958) report that, for low SES families, referrals tend not to come from the individual or the individual's family, but from agencies. The poor child tends to be referred for mental health services by the school or court, not by the family (Joint Commision on Mental Health of Children, 1970, p. 241).

Expectancies enter into parental failure to seek professional attention for a damaged child in other ways. The disconfirmation of parental expectancies for normal child development may be a very punishing experience. Failure to seek professional assistance has been reported to originate in parental reactions of disbelief or dispair to an initial diagnosis or to a diagnosis grossly different from parental expectations (Farber, 1960). This phenomena called "novelty shock" by Wolfensberger and Menolascino (1970) has been discussed in connection with the diagnosis of retardation and severe illness. In these situations parents are described as being overwhelmed by the disconfirmation of this expectation of a normal child. Where the parental response is to reject the child they may never obtain professional assistance. In instances in which the diagnosis, rather that the child is rejected, the child's anomalous development may gradually force acceptance of the problem and a consequent interest in its remediation

Wolfensberger & Menolascino, 1970). Parents may also seek a series of alternate opinions until they find one that is, in some manner, more acceptable to them (Anderson, 1971).

Higher Order Social Learning Theory Constructs

Thus far individual reinforcements and expectancies have been discussed in relation to individual behaviors. In practice, however, analysis at so molecular a level is a cumbersome process. In order to cope with this problem Rotter offers several higher order constructs which involve "needs" and "generalized expectancies".

Needs. Needs are inferred from groups of behaviors that are directed toward the same or similar reinforcements (Rotter et al, 1972). Six categories of needs are offered; around these similar rewards and groups of functionally related behaviors are organized. These are: recognition-status, protection-dependency, dominance, independance, love and affection, and physical comfort. This synthesis makes possible conceptualizations involving broad classes of rewards, costs and goal directed behaviors. It is expected that this scheme will assist in the study of parent training and performance in the home program.

These "need" categories may prove to be useful in determining which categories of rewards are most salient for a given parent. Social learning theory may provide a greater understanding of how parental needs are related to compliance or noncompliance with home program activities and so suggest ways of designing procedures which will result in lower drop out rates. However, Rotter's grouping is still somewhat abstract and so points the way only in the broadest terms. The grouping does not specify the conditions under which an individual will perceive his ability to satisfy his needs to be enhanced or

threatened. So while "independence" is included as a category of functionally related behaviors, it is necessary to consult other formulations for a more complete understanding of how variables affecting gain or loss of independence may influence parental behavior. In this regard students of reactance theory (Brehm, 1966; Berkowitz, 1973) have generated a literature about the conditions under which people perceive their freedom of action to be limited and how they may respond to this threat. Such a theory has potential for deepening our understanding of client noncompliance with instructions from professionals (Davison, 1973). More specifically reactance theory may be applied to the study of responses of parents to limitations of their freedom incurred through a commitment to a program for home care for a handicapped child. Ultimately the study of reactance may be useful in the creation of strategies that minimize this source of parental resistance.

Other motives for noncompliance connected with other needs may also be observed. Instances in which the expected rewards of childrearing do not occur or when long term plans, predicated upon the assumption that children become increasingly independent over time, must be modified may influence a parental behavior toward a handicapped child. This is true of mothers who had planned to renew their careers after a number of years and who may feel thwarted because of the loss of rewards associated with a career (Robinson, personal communication; Schild, 1971).

Generalized Expectancies. Similarly constructs such as generalized expectances for goal attainments (Cromwell, 1967; Rotter, Chance & Phares, 1972) may assist our efforts to understand and predict parental

mastery and utilization of home program activities. Cromwell's (1967) work with retarded children suggests that children having extensive histories of failure respond to failure by putting forth less effort on succeeding trials than do children who have met with more success in their endeavors. Possibly parents of "damaged" children who have experienced very little success in childrearing will develop low generalized expectations for goal attainment in the area of child rearing. Such a sense of failure might well arise out of the difficulties of caring for a severely disabled child or through experiences with an oppositional child. In addition popular lore about the futility of enhancing the development of children who have organic abnormalities may also contribute to parental expectations of failure.

Yet another variable believed to affect parental behavior may be cited. Miller and Gottlieb (1974 a, 1974 b) have developed a new scale on the MMPI with which they are able to predict the outcomes of behavior management programs. They suggest that their instrument measures the balance between a mother's tendency to internalize responsibility and her tendency to externalize responsibility. Mothers who behave as though responsibility lies with others are less likely to implement a home program.

Prerequisites for the Acquisition and Utilization of Parent Skills

Social learning theory principles permit both the evaluation of the extent to which a parent's needs will be fulfilled by the completion of certain activities and the evaluation of parental expectations of reinforcement from the activity. However, it does not tell us which tasks to study nor do social learning theory principles offer a systematic means for determing whether an activity is pertinent to the

outcome of an intervention program. Consequently we must specify those classes of activities and condition believed to be required for the successful acquisition and utilization of intervention skills.

Tallman (1971) offers four prerequisites for group functioning: commitment, resource control, consensus and boundary maintenance, that may be applicable to family functioning. He advances the argument that these behavioral and material conditions function as prerequisites for the successful functioning of the family.

Commitment. At this time it is possible to provide examples of interventions whose failures may be traced to the absence of a prerequisite specified by Tallman. To begin with, commitment implies a decision by family members to maintain the handicapped child as a family member. Lack of this commitment may be seen in the early institutionalization of a child (Wolfensberger & Menolascino, 1970). It can also be seen where a family member sabotages efforts to bring about improvements in child behavior in order to obtain the child's expulsion from the household (Reid & Hendricks, 1973; Tharp & Wetzel, 1969).

Resources. The second factor is resource control. A family must have control over sufficient quantities of food, shelter and manpower to maintain itself and its disabled member. It is well documented that retardation of a child places taxing emotional and physical demands on family members (Farber, 1960; Holt, 1958; Mercer, 1966) as do a child's physical disabilities (Mercer, 1966; Walker, Thomas & Russel, 1971), oppositional behavior (Berkowitz & Graziano, 1972) and chronic illness (Crain, Sussman & Weil, 1966). Klein, Dean and Bogdonoff (1967) report that spouses of chronically ill persons experience

increases in tension, illness and a reduced capacity to work. This unfortunate reaction is of particular concern and may be expected to adversely affect the success of home programs for a disabled child.

Further data which point to the need to study the resources required by families to support an intervention is found in the work of Patterson, Cobb and Ray (1973), who have observed that mothers lacking financial and manpower resources have difficulty learning child management techniques. The importance of adequate capabilities and housing has been documented in connection with compliance with vocational rehabilitation programs for retarded adults (Brolin & Wright, 1971).

Conversely it seems likely that a reduction of parental distress will have a positive effect on the child. This supposition is supported by the finding that an improved rate of recovery from surgery be hospitalized children is associated with efforts to reduce the anxiety of their mothers (Skipper & Leonard, 1968). Because exhaustion is a hazard of keeping a disabled child at home (Holt, 1958) and because exhaustion is associated with the institutionalization of children (Mercer, 1966) Wolfensberger (1969) urges that problem ridden families having a severely retarded child be eligible for housekeeping assistance, dat care and income subsidy so that they may continue to maintain the child in their home.

Consensus. The third factor is consensus. Family members must reach some agreements about the nature of their goals, the allocation of tasks and the coordination of activities, including child care and therapy. So long as there is consensus among parents regarding the execution of household and therapeutic activities, and between parents and professionals that home program goals are being met the situation

will continue unchanged. For example, Tharp and Wetzel (1969) cite an instance in which parental quarreling was so intense that the parents were unable to cooperate with one another to accomplish the targeted behavior change. Patterson, Cobb and Ray (1973) have observed that marital discord is associated with failure to learn childrearing skills. Conflict between a retarded child and members of his family or between the child and his school is thought to be associated with the institutionalization of the retarded person (Mercer, 1966).

Boundary Maintenance. The fourth factor is boundary maintenance. Families must maintain control over their internal affairs if they are to survice. In situations where major events affecting family members are determined by external agents, the family becomes less autonomous and less essential to its members. This is an important consideration in families that are impoverished or so disorganized that civil authorities make the family's major decisions; in such cases family members may become unused to making decisions and so completely lose the ability to function without outside assistance.

The above four categories encompass behavioral and physical conditions that need to be considered when attempting to account for the outcome of an intervention. Given a knowledge of these conditions, social learning theory can then be used (theoretically at least) to estimate the probability that the parents will attempt to carry out the program.

Conclusions

In this paper a substantial number of reports have been cited documenting the finding that parents can successfully implement interventions with their children. While there is little doubt that the approach of using parents as teachers can be quite useful, it is also clear that no one program has been entirely effective with all families. The causes of these failures have not been systematically studied and only a very few workers are attempting to develop intervention plans that are designed to succeed where initial measures have failed. It is argued that in addition to research on the development and validation of intervention procedures and curricula for the "cooperative" family there is a critical need for intervention techniques applicable to families which do not respond to our standard approaches. Further the author has suggested that these procedures will be most readily obtained through the study of variables already demonstrated to influence the implementation of home programs by parents. In this connection, lack of reinforcement, limited expectancies of success, and low levels of variables hypothesized to be prerequisites for effective household functioning (commitment, consensus, boundary maintenance, and resources) have been implicated as having the capacity to adversely influence the outcomes of parent interventions.

The development of procedures adapted to"difficult" families will require a more detailed knowledge of the effects of different configurations and levels of these variables. Once the configurations of these

variables that deter the success of home interventions are identified, it will be possible to devise strategies for overcoming their negative effects. It is likely that we already have a range of techniques at our disposal for just this purpose. Techniques for encouraging parent participation will have to be adapted to the characteristics of the parents and their particular problems. Thus it is anticipated that interventions to further implement stalemated programs will require the identification of factors responsible for failure and the removal of the blockage by means which are appropriate, both to the inhibiting variable and to the family members. For example, should the difficulty stem from insufficient manpower, the provision of additional help may be all that is required. However where there is a lack of consensus between spouces, professionals may tailor an intervention plan for a family from an array of possible techniques ranging from behavioral contracting to reflective counseling. Ultimately it is hoped that for each situation that can prevent the implementation of a program there will be a set of techniques from which particular solutions suited to the problem variable and the characteristics of the family members may be selected.

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